

ZYLKA, Romuald

The 6th Congress of the International Quarternary Association (INQUA)  
Przegl geolog 10 no. 2:84-87 P '62.

1. Instytut Geologiczny, Warszawa.

ZYLKA, Romuald

Naphtha and gas deposits in Canada. Przegl geol 9 no.8:437-440 Ag '61.

1. Instytut Geologiczny, Warszawa, ul. Rakowiecka 4.

KIJEWSKI, Wacław, mgr inż.; NACZYŃSKI, Jerzy, inż.; ZYLKO, Wacław, mgr.

Problems and state of gas engineering in the German Democratic Republic as seen from certain centers. Gaz woda techn sanit 37 no.4/5:133-136 Ap-May '63.

1. Central Gas Engineering Laboratory, Warsaw.

ZYLKOWSKI, Tadeusz

Some aspects of the shipping activities on the Poland-Iceland route.  
Tach gosp morska 11 no.1:7-9 Ja '61.

1. Polska Zegluga Morska, Szczecin.

URBANSKI, Tadeusz; SKOWRONSKA-SERAFINOWA, Barbara; ZYLOWSKI, Jerzy

Reactions of aromatic amines with cyanoguanidine. IX. Naphthalamidine-  
urea and its reactions with amines. Roczniki chemii 33 no.6:1377-1382 '59.  
(EEAI 9:9)

1. Katedra Technologii Organicznej II Politechniki, Warszawa i  
Zaklad Syntezy Lekow Instytutu Gruzlicy, Warszawa.  
(Cyanoguanidine) (Amines)  
(Naphthylamidinourea) (Aromatic compounds)

ZYLOWSKI, Jerzy, mgr inz.

Exporting Polish-made factories. Horyz techn 18 no.1:6-8 '65.

Z/032/60/010/08/006/033  
E073/E535

AUTHOR: Zymák, V., Engineer

TITLE: Volumetric Efficiency of Radial Piston Pumps<sup>3</sup>

PERIODICAL: Strojirenství, 1960, Vol 10, No 8, pp 577-583

ABSTRACT: A new method is proposed for calculating the volumetric efficiency of radial piston pumps which takes into consideration the eccentricity of the pistons in their cylinders as well as the eccentricity of the rotor on its spindle. The volumetric efficiency is expressed by an equation which contains terms for taking into consideration leakage and suction losses. The influence of the pressure and temperature on the deformation of the individual parts of the pump are also taken into consideration. The author derives formulae for determining the optimum pressure gradient, the one for which the temperature rise will be lowest. The use of the derived relations is illustrated on a practical example of calculating the volumetric losses in a radial pump with five 18 mm dia. pistons, 1500 r.p.m. with a throughput of 14.5 litres/min at a pressure of 250 atm., the peak pressure being up to 350 atm.; this

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### Volumetric Efficiency of Radial Piston Pumps

high pressure rotary pump has been designed and is being manufactured by the Lenin (Škoda) Works, Pilsen. In the conclusions it is stated that the suction losses cannot be expressed for the time being by a satisfactory mathematical formula and their magnitude can only be determined by practical tests. Reduction of these losses can be obtained by a suitable choice of the running speed, increase of the size of the suction canals and mainly by filling the spaces of the piston pump with the liquid to be transported by means of a low pressure auxiliary pump. The leakage losses can be reduced by reducing the tolerances to the minimum possible; in calculating these losses it is essential to take into consideration the eccentricity of the sealing components, the changes in the viscosity of the liquid and the changes in the play as a function of the pressure and temperature. In medium pressure <sup>pumps</sup> and particularly in high pressure, pumps the increase in the sealing gaps as a result of the high

Card 2/3 pressure of the liquid has the greatest influence on the



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Volumetric Efficiency of Radial Piston Pumps

leakage losses and, therefore, the respective components of the pump and also of the motor should have a high rigidity. Calculation of volumetric losses of pumps and hydraulic motors carried out on the assumption of a constant viscosity of the fluid and of zero eccentricity is incorrect even for low operating pressures and does not even provide an approximately accurate picture on the conditions pertaining in reality. ✓ B

There are 8 figures and 6 references, 5 of which are Czech and 1 Soviet.

ASSOCIATION: Závody V. I. Lenina, Plzeň (V. I. Lenin Works,  
Pilsen)

Card 3/3

ZYL'YEV, L. M., EARDIN, I. P., OSTROUKHOV, M. Y. and KHODAK, L. S.

"Neue Auffassungen über den Verbrennungsprozess des Kokes an den Windformen  
des Hochofens," Neue Hütte, No.4, 1956

Metallurgical Inst., AS USSR

ZYMA, Besim, docent dr.

Hazards of laryngeal stenosis. Shendet. pop. 23 no.5:16-20 '62.  
(LARYNX)

ZYMA, Besim, doc. dr.

The hazard of toxic effects of streptomycin on the auditory  
system. Shendet. pop. 6. '62.  
(STREPTOMYCIN TOXICOLOGY) (VESTIBULAR APPARATUS)

ZYMAK, V., inz.; KURKA, E.

Hydraulic drive of extruding presses. Strojirenstvi 13  
no. 12: 901-908 D '63.

1. Zavody V. I. Lenina, Plzen.

Yakov, V., inz.

Dynamics of a heavy hydraulic unit with pressure accumulator drive.  
Strojirenstvi 14.no.11:812-819 N '64.

1. Zavody V.I.Lenina National Enterprise, Plzen.

TARAN, P., kand.tekhn.nauk; PRISTAVKA, A.; ZYMALEV, G.; SHALIMOV, A.;  
SEVAST'YANOV, V.

Speeding-up the rate of increase of labor productivity in the  
Dnepropetrovsk Economic region. Sots. trud 5 no.9:98-108 S '60.  
(MIRA 13:10)

1. Glavnyy inzh. tresta "Leninruda" (for Taran).
  2. Zam.nachal'nika  
tekhnicheskogo otdela tresta "Leninruda" (for Pristavka).
  3. Upravl-  
yayushchiy trestom "Dzerzhinskruka" (for Zymalev).
  4. Nachal'nik  
otdela organizatsii truda tresta "Dzerzhinskruka" (for Shalimov).
  5. Zam. direktora po trudu i kadram zavoda im. Dzerzhinskogo  
(g.Dneprodzerzhinsk) (for Sevast'yanov).
- (Krivoy Rog Basin--Iron mines and mining--Labor productivity)  
(Dneprodzerzhinsk--Steel industry)  
(Socialist competition)

ZYMALEV, G.S.; IOFFE, Z.M.; PODKAMINNIY, G.F.

Economical operation at Dzerzhinskud Trust mines. Gor.zhur.  
no.1:15-17 Ja '65.

(MIRA 18:3)

1. Trest Dzerzhinskruada, Krivoy Rog.



ZYMALEV, G.S.; TIMCHENKO, O.G.

Improving the boring of deep holes in Krivoy Rog Basin mines.  
Gor. zhur. no.2:39-42 F '65. (MIRA 18:4)

1. Upravlyayushchiy trestom Dzerzhinskruka (for Zymalev).
2. Nachal'nik nauchno-issledovatel'skoy laboratorii tresta Dzerzhinskruka (for Timchenko).

ZYMALEV, G.S.

Improving systems of working at Ingulets Mining Administration  
mines. Met. i gornorud. prom. no.6:72-74 N-D '64.

(MIRA 18:3)

MALAKHOV, G.M., doktor tekhn. nauk; CHIRKOV, Yu.I., kand. tekhn. nauk;  
KUCHERYAVENKO, I.A., kand. tekhn. nauk; ZYMALEV, G.S.;  
KHIVRENKO, A.F.; NESTERENKO, V.V.

Introduction of new variants of the system of sublevel caving  
at "Dzerzhinskud" Trust mines. Met. i gornorud. prom. no.2:  
50-54 Mr-Ap '65. (MIRA 18:5)

ZYMALEV, G.S.; MAYDAN, D.S.

Labor productivity and cost of ore in the Krivoy Rog Basin.  
Met. 1 gornorud. prom. no.2:59-63 Mr-Ap '65.

(MIRA 18:5)

ZINOV'YEV, V.N.; ZYMALEV, G.S.; ISKRENNKO, I.V.

Working thin deposits at the Il'ich mine. Gor. zhur. no.4:23-26  
Ap '65. (MIRA 18:5)

1. Trest Dzerzhinskruada, Krivoy Rog.

TITOV, V.D., gornyy inzhener; TARAN, P.N., gornyy inzhener; ZYMALEV, G.S.,  
gornyy inzhener; OSTROUKHOV, A.I., gornyy inzhener; AL'TSHUL'NAYA,  
M.A., gornyy inzhener; BORZENKO, P.V., gornyy inzhener.

"Underground mining of ore and placer deposits" by R.P. Kaplunov  
and other. Reviewed by V.D. Titov and others. Gor.zhur.no.11:63-  
64 N '56. (MLRA 10:1)

(Mining engineering--Study and teaching)

(Kaplunov, R.P.)

ZYMALEV, G. S.

Economic advantages of doorless cars. Gor. zhur. no.6:32-33 Je '65.  
(MIRA 18:7)

1. Upravlyayushchiy trestom Dzerzhinskruka.

ZYMALEV, G.S., gornyy inzh.; IOFFE, Z.M., inzh.-ekonomist

Capital investments and capital yield in the ore dressing plants  
of the "Dzerzhinskruuda" Trust. Gor. zhur. no.10:30-33 O '65.  
(MIRA 18:11)

1. Trest Dzerzhinskruuda, Krivoy Rog.



ZYMALEV, G.S.; MAYDAN, D.S.

Possibilities of reducing losses and depletion of ores in the  
Krivoy Rog Basin. Met. i gornorud. prom. no.4:54-56 JI-Ag '65.  
(MIRA 18:10)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200

21

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The sulfur content of Donets coals. S. N. Zverev. *Coke and Chem. (U. S. S. R.)* 9, No. 9, 15-16 (1939); *Chimie Industrielle* 42, 797. -- The S is distributed throughout the different seams of the deposit in zones; within each zone the variations in the total S content are relatively small. In most cases the org. S content is fairly const., while the pyritic S throughout the deposit varies from 0.02 to 6.48%. The sulfate S generally does not exceed 0.1%. Pyritic S can be calcd. from total S by means of the formula:  $S_{py} = -0.38 + 0.537S_{total}$ . A. P. C.

ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200

1ST AND 2ND CODES																										3RD AND 4TH CODES																									
COMMON ELEMENTS																										COMMON VARIABLES INDEX																									
<p>Preparation of Highly Dispersed Alumina Suitable for Polishing. K. Jr. Manilov and F. I. Zymbal (<i>Legkie Metally (Light Metals)</i>, 1937, 6, (10), 8-15; <i>Chem. Zentr.</i>, 1938, 108, (1), 4706).—[In Russian.] A laboratory method is described for the preparation of corundum from an aluminate solution.</p> <p>—D. R. S.</p>																																																			
<p>ASM-A METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
<p>REGION DIVISIONS</p>																																																			
<p>SECTION DIVISIONS</p>																																																			

ZYMALEV, G.S., gornyy inzh.; KHIVRENKO, A.F., gornyy inzh.; RED'KO, I.A.,  
gornyy inzh.; DYCHUK, G.K., gornyy inzh.

Ways of reducing expenditures for mine ventilation. Gor. zhur.  
no. 12:10-13 D '65. (MIRA 18:12)

ZYMALEV, G.S.

Analysis of the change in the cost of ore mining. (or. zhur.  
no. 11:7-10 N '64. (MIRA 18:2)

1. Upravlyayushchiy trestom Dzerzhinskruka.

ZIMAN, S.M. [Zyman, S.M.]

Some interesting and rare plants from the vicinity of the village  
of Yasinya in Transcarpathian Province. Ukr. bot. zhur. 21 no.4:  
102-104 '64. (MIRA 17:11)

1. Srednyaya shkola, Yasinya, Zakarpatskoy oblasti.

ZYMEK-GIERMANSKA, Teresa

Notes on controlling prolonged uterine hemorrhages with the aid of  
Primosiston. Ginek. pol. no.4:565-568 '62.

1. Z II Kliniki Położnictwa i Chorob Kobietych AM we Wrocławiu  
Kierownik: prof. dr K. Jablonski.  
(UTERINE HEMORRHAGE) (HYDROXYPROGESTERONE)  
(ESTRADIOL)

ZYMEK-GIERMANSKA, Teresa

Vaginal foreign bodies in young girls. Pol. tyg. lek. 17 no.31:1222-1225 30 JI '62.

1. Z II Kliniki Poloznictwa i Chorob Kobiacych AM we Wroclawiu; kierownik:  
prof. dr med. Kazimierz Jablonski.  
(VAGINA)



ZYMEK-GIERMANSKA, Teresa

Unusual topography of fallopian tubes in the roentgenographic picture.  
Ginek. pol. 33 no.6:851-860 '62.

1. Z II Poloznictwa i Chorob Kobiacych AM w Wroclawiu. Kierownik:  
prof. dr K. Jablonski.  
(FALLOPIAN TUBES) (STERILITY FEMALE)

LA-2-GERMANIA, Teresa  
DZIUBA, Andrzej; ZYMEK-GERMANIA, Teresa

Estimation of the value of histopathological examination of  
scrapings from the surface of erosion of the vaginal part of  
the uterus for an early diagnosis of cancer. Gin. polska  
28 no.1:39-45 Jan-Feb 57.

1. Z II Kliniki Położnictwa i Chorob Kobietych A.M. we  
Wrocławiu Kierownik: prof. dr. K. Jablonski. Doc. Dr.  
Andrzej Dziuba, Wrocław, Al. Kollataja 32 m. 6.  
(UTERUS NEOPLASMS, diag.

histopathol. exam. of scrapings from surface of  
erosion from portio vaginalis, value in early diag. (Pol))  
(CERVIX, UTERINE, dis.

erosion of portio vaginalis, value of histopathol. exam.  
of scrapings from surface in early diag. of uterine cancer  
(Pol))

ZYMEK-GIERMANSKA, Teresa; SWARD, Jozef

Attempted gestanone therapy of imminent and habitual abortions.  
Wiad. lek, 18 no.18:1447-1450 15 8 '65.

1. Z II Kliniki Poloznictwa i Chorob Kobietych AM we Wroclawiu  
(Kierownik: prof. dr. med. K. Jablonski).

STECKI, Konrad, mgr inz.; ZYMELKA, Franciszek, mgr.

Mechanical production of etched stencils. Przegl. geod. 36  
no.2:46-48 F'64

ZYMIRSKI, Andrzej

I drove in the Murburgring. Motor 11 no.28:14 15 J1 '62.

ZYMIRSKI, A.

Some remarks on difficulties in the traffic of Warsaw.  
Motor 11 no.30:3 29 J1 '62.

ZYMIRSKI, A.

Back from abroad; some notes on the traffic in Warsaw.  
Motor 11 no.29:3 22 J1 '62.

Zymirski, A.: Rusiniak, S.

"Our impressions from the Six-Day Race." p. 788

SVET MOTORU. (Svaz pro spolupraci s armadou) Praha, Czechoslovakia, Vol. 9,  
no. 25/26, Dec., 1955.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 9, Sept. 1959

Uncl.



Zymny, E.

Poland/Analytical Chemistry - Analysis of Inorganic Substances, G-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1246

Author: Zymny, E.

Institution: None

Title: Titrimetric Determination of Silicon Dioxide in Cement

Original

Periodical: Cement. Wapno. Gips, 1956, Vol 12, No 6, 152-153 (published in Polish)

Abstract: See Referat Zhur - Khimiya, 1956, 1154

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Zymny, F.

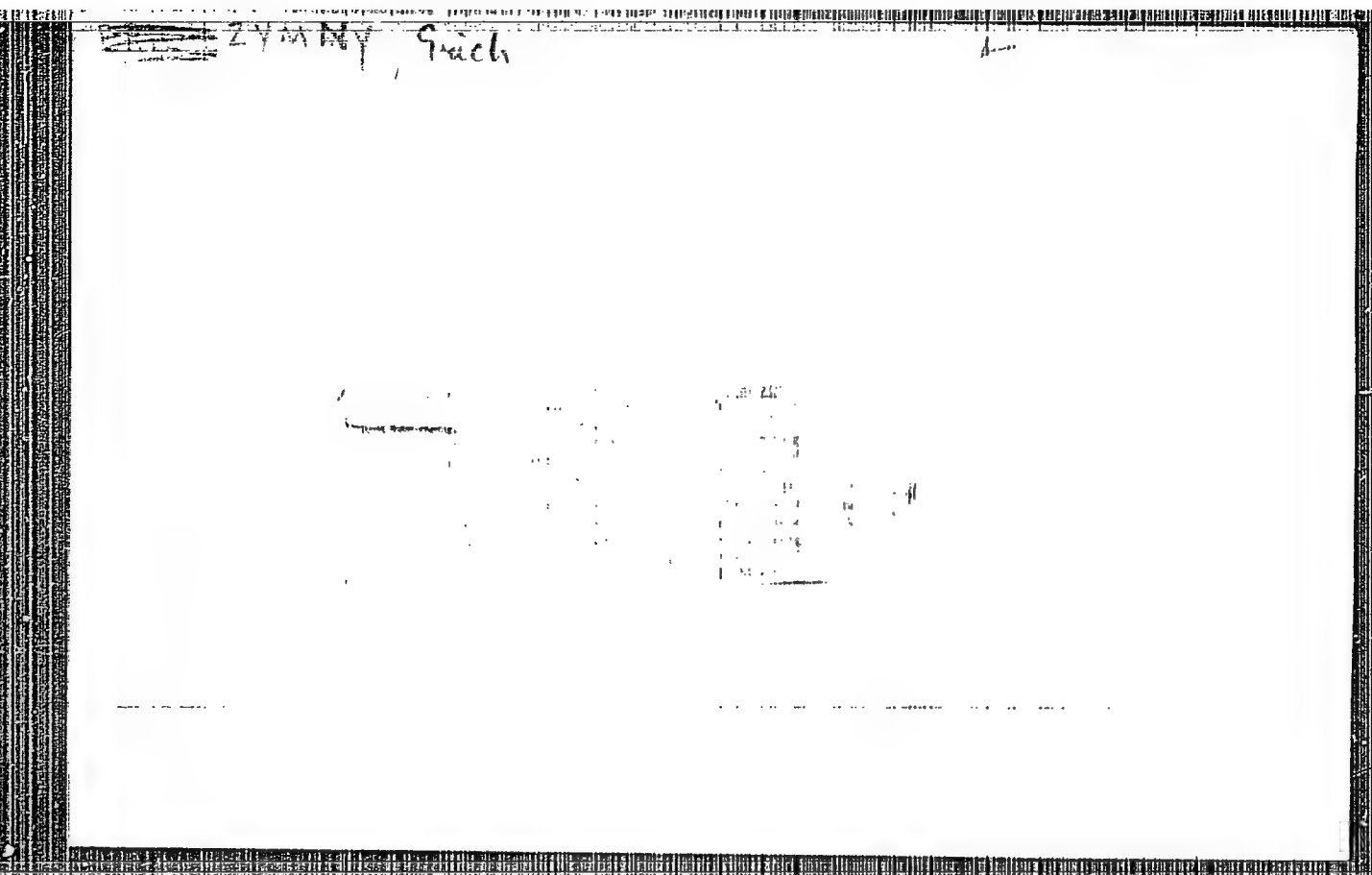
✓ Determination of potassium in water and effluents as potassium  
borotetraphenyl. *Anal. Chem.*, 1933, 5, 317-323. ...  
The sample is concentrated and acidified by acetic acid, and K is  
pptd. by adding aq.  $\text{NaH}_2\text{C}_2\text{O}_4$  ("kaliquent"). The pptd.  
 $\text{KHC}_2\text{O}_4$  is determined either gravimetrically after drying at  
120° or volumetrically by 0.1N  $\text{AgNO}_3$ . Li, Na, Ca, Ba, and Sr do  
not interfere, but Rb, Cs, and  $\text{NH}_4$  are pptd. If K and  $\text{NH}_4$  are  
both present, the mixed ppt. is weighed, and, after driving off the  
 $\text{NH}_3$  with aq.  $\text{NaOH}$ , the residual is again collected and weighed  
(*Anal. Chem.*, 1933, 337). A. R. Pearson.

ZYMNY, ERICH

R.1

✓ Chemical-pharmaceutical analyses with a simple colorimeter.  
Erich Zymny, Pharm. Ztg. 99, 120 (1954)  
The construction of a simple visual colorimeter is described.  
Edward H. Sheets

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ACCESSION NR: AP4040935

5/0185/64/009/006/0659/0663

AUTHOR: Alf'orov, Zh. I. (Alferov, Zh. I.); Zy'mogorova, N. S. (Zimogorova, N. S.); Samol'yanov, O. M. (Samol'yanov, A. M.); Trukan, M. K.

TITLE: Photoelectric properties of heterojunctions in some semi-conductors

SOURCE: Ukrayins'ky'y fizy\*chny\*y zhurnal, v. 9, no. 6, 1964, 659-663

TOPIC TAGS: epitaxial film, epitaxial layer, heterojunction, non-rectifying current contact

ABSTRACT: Applying the gas-transport method and using iodine as a transport agent, films of GaAs on GaP, GaP, and Ge on GaAs were prepared to obtain p-n heterojunctions. The transporting material was doped to produce a conductivity of a type opposite to that of the base. Furthermore, a method for obtaining nonrectifying contacts carrying current to the epitaxial layers of Ge, GaAs, and GaP was developed. The current-voltage characteristics of the heterojunctions and their dependence on temperatures were measured. It was

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ACCESSION NR: AP4040935

found that there are two exponential parts in the forward branch of the characteristics. The dependence of the voltage on the temperature in the forward direction is linear. The spectral distribution of photosensitivity has a characteristic shape with two maximums and is determined by both substances of the pair. The forbidden gap of the substance with a larger width of the band can be determined by the maximum in the shortwave region of the spectrum. The red limit of photosensitivity can be determined by the width of the forbidden gap of the substance with a smaller width of the band. Orig. art. has: 6 figures and 4 formulas.

ASSOCIATION: Fizy\*ko-tekhnichny\*y Insty\*tut im. A. F. Yoffe. AN, SRSR, Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 20Jan64 /

ATD PRESS: 3056

ENCL: 00

SUB CODE: EC, EM

NO REF SOV: 009

OTHER: 001

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Distr: 4E2c/4E2b(e)

✓ Apparatus for chrome plating of tool and machine parts.  
I-II. E. Zymorski (Inst. Mech. Precyzyjnej, Warsaw).  
Metalloobrabotka 13. 50-9. 88-90(1939). A. M. Pommer

Jw  
1/1

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ZYMOVETS, Viktor Naumovich; STOROZHUK, O.O.; LUPKO, A.Ya., red.;  
GULENKO, O.I.[Hulenko, O.I.], tekhn. red.

[Production concentration on collective farms and its  
economic efficiency] Kontsentratsiia vyrobnytstva v kol-  
hispakh i ii ekonomichna efektyvnist'. Kyiv, Derzhsil'-  
hospvydav URSR, 1962. 82 p. (MIRA 16:12)  
(Ukraine--Collective farms--Management)

ACC NR: AP7004974

SOURCE CODE: UR/0048/66/030/009/1463/1466

AUTHOR: Vlasenko, N.A.; Zyn'o, S.A.

ORG: none

TITLE: Polarization effects in electroluminescent ZnS:Mn films /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no.9, 1966, 1463-1466

TOPIC TAGS: electroluminescence, zinc sulfide, manganese, electric polarization, LUMINOPHOR

ABSTRACT: The authors have investigated polarization effects in 0.25 micron thick films of a ZnS:Mn electroluminophor between SnO<sub>2</sub> and Al electrodes. The metallic electrode was separated from the luminophor by a 100-150 Å thick layer of SiO. It was found that when a steady voltage is applied to such a cell it becomes polarized and the luminescence intensity rapidly drops by a factor of about 100. The polarized condition persisted for several hours when the cell was short circuited, but the cell could be restored to the unpolarized condition by irradiation with photons having energies between 1.6 and 3 eV. When to a polarized cell there was applied a voltage of the same sign as the polarizing voltage there resulted only weak luminescence, but when a voltage of the opposite sign was applied, the initial luminescence flash was brighter than that from an unpolarized cell. The luminescence intensity (both of the initial flash and in the steady state) was higher when the aluminum electrode was the

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ACC NR: AP7004974

anode when it was the cathode, and the duration of the polarizing and depolarizing processes also depended somewhat on the polarity. The presence of moisture reduced the polarization and accelerated the depolarizing process. It is hypothesized that the polarization is due to accumulation of free carriers at the luminophor-electrode boundary as a result of entrapment of electrons in deep traps. The ratio of the polarization field to the polarizing field was evaluated as the ratio  $(V_2 - V_1)/V_2$ , where  $V_1$  is the initial polarizing voltage and  $V_2$  is the voltage of the same sign that must be applied to the polarized cell to produce an initial flash of the same intensity as the flash produced by application of  $V_1$  to the unpolarized cell. This ratio was found to be about 0.35 and to vary little with the magnitude and sign of the polarizing voltage. The polarization effects provide a simple explanation for a number of experimental facts, including: 1) the low brightness achieved by application of successive pulses of the same sign; 2) the strong influence of a test pulse of opposite sign on the brightness produced by the following ten to twenty exciting pulses; 3) the differences in the slopes of the voltage-brightness characteristics for different types of excitation; and 4) the transition phenomena that occur when successive pulses of alternating sign are applied to the unexcited phosphor. Orig. art. has: 1 formula, 2 figures and 1 table.

SUB CODE: 20

SUBM DATE: none

ORIG. REF: 002

OTH REF: 001

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ACC NR: AP7004975

SOURCE CODE: UR/0048/66/030/009/1467/1469

AUTHOR: Vlasenko, N.A.; Zyn'o, S.A.

ORG: none

TITLE: Investigation of the characteristics of low-voltage electroluminescent ZnS:Mn films under pulse excitation /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no.9, 1966, 1467-1469

TOPIC TAGS: electroluminescence, zinc sulfide, manganese, time constant, pulse rate, optic brightness  
 ABSTRACT: The authors have investigated the pulsed characteristics of thin electroluminescent ZnS:Mn films produced by the two-stage technique of N.A.Vlasenko and Yu.A.Popkov (Optika i spektroskopiya, 8, 81 (1960)) in order to assess the technical possibilities of these low-voltage electroluminophors. It was found that on application of a 0.1 to 1.0 millisecc square pulse the brightness would rise exponentially with a time constant of about 0.3 millisecc for the duration of the pulse and would then decay exponentially with a time constant of 1.2 millisecc. Experiments with an equivalent circuit showed that these time constants are much longer than the RC constants of the cell. It is hypothesized that the long time constants are associated with the long lifetime of the excited state of the  $Mn^{2+}$  ions, with carrier entrapment processes, and with polarization effects. It was not possible to achieve a brightness exceeding 5 to 10 nit with excitation by pulses of the same sign, but brightnesses several orders of magnitude higher could be obtained by excitation with pulses of

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ACC NR: AP7004975

alternating sign. The brightness increased linearly with the pulse repetition rate for rates between 20 and 1000 Hz and was proportional to the 8-th to 10-th power of the pulse height for brightnesses below 20 nit. The dependence of the brightness on the pulse duration for fixed height and repetition rate was more complex. It was found that brightnesses of 10 to 20 nit could be achieved with 10 to 50 microsec pulses of heights below 30 V and repetition rates from 100 to 300 Hz. It is concluded that the investigated electroluminophors are suitable for use in sign indicators, matrix indicator screens, and other devices that do not require a duty factor higher than 0.001. Orig. art. has: 3 figures.

SUB CODE: 20

SUBM DATE: none

ORIG. REF: 002

OTH REF: 001

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1ST AND 2ND LETTER																										3RD AND 4TH LETTER																										5TH AND 6TH LETTER																										7TH AND 8TH LETTER																									
AUTHOR INDEX																										SUBJECT INDEX																										CROSS INDEX																										CROSS INDEX																									
<p><b>OLIVINE BRICK FROM NORTH CAUCASIAN REFRACTORIES, USSR. (No. 44, 78 (1938)).</b>—The chemical composition of the raw material is as follows: <math>\text{SiO}_2</math> 38.30, <math>\text{Al}_2\text{O}_3</math> 0.85, <math>\text{Fe}_2\text{O}_3</math> 7.23, <math>\text{FeO}</math> 1.07, <math>\text{MgO}</math> 38.64, <math>\text{H}_2\text{O}</math> 12.74. To obtain forsterite (olivine) refractories from this material sufficient magnesite must be added to form forsterite with the silica of the rock and spinel oxides. By calculation this amounted to 17 to 18% magnesite. Experiments were carried out with varying additions of magnesite. The serpentine material was precalcined at <math>1300^\circ</math> to <math>1400^\circ</math>, and the magnesite was added partly as caustic magnesia and sintered magnesite. The bodies were made up with a 25% solution of magnesium chloride to give greater green strength and to accelerate forsterite formation. Results are given for additions of 25%, 20%, and 15% of magnesite. With increasing magnesite content the refractoriness under load increased while the cold strength diminished. Refractoriness (<math>1825^\circ</math>) was the same in all cases.</p>																																																																																																							



Zynkina, V. M. Olivine from North Caucasian serpentines. *Ukrainian Journal of Chemistry*, No. 44, 74 (1938). — The percentages of the chemical composition of the olivine from the serpentines are:  $\text{SiO}_2$  38.30,  $\text{Al}_2\text{O}_3$  0.35,  $\text{FeO}$  7.25,  $\text{CaO}$  1.07,  $\text{MgO}$  38.08,  $\text{H}_2\text{O}$  12.74. To obtain forsterite (olivine) refractories from this material sufficient magnesite must be added to form forsterite with the silica of the rock and spinel oxides. By calculation this amounted to 17 to 19% magnesite. Experiments were carried out with varying additions of magnesite. The serpentine material was preheated at 1300° to 1400°, and the magnesite was added partly as anhydrous magnesite and blundered magnesite. The bodies were made up with a 25% solution of magnesium chloride to give greater green strength and to accelerate forsterite formation. Results are given for additions of 25%, 28%, and 15% of magnesite. With increasing magnesite content the refractoriness under load increased while the cold strength diminished. Refractoriness (1825°) was the same in all cases.



Zynkina, V. M. OLIVINE BRICK FROM NORTH CAUCASIAN SERPENTINITE. *TRUSTA VNIIT* 1934, No. 44, 78 (1934).—The percentage

chemical composition of the raw material was:  $\text{SiO}_2$  38.30,  $\text{Al}_2\text{O}_3$  0.35,  $\text{Fe}_2\text{O}_3$  7.25,  $\text{FeO}$  1.67,  $\text{MgO}$  38.06,  $\text{H}_2\text{O}$  12.74. To obtain forsterite (olivine) refractories from this material sufficient magnesite must be added to form forsterite with the siliceous of the rock and spinel oxides. By calculation this amounted to 17 to 18% magnesite. Experiments were carried out with varying additions of magnesite. The serpentine material was preheated at  $1300^\circ$  to  $1400^\circ$ , and the magnesite was added partly as

maistic magnesite and shivered magnesite. The bodies were made up with a 25% solution of magnesium chloride to give greater green strength and to accelerate forsterite formation. Results are given for additions of 25%, 20%, and 15% of magnesite. With increasing magnesite content the refractoriness under load increased while the cold strength diminished. Refractoriness ( $1335^\circ$ ) was the same in all cases.

AVAILABILITY STATEMENT

APPROVED FOR RELEASE

SOURCE CODE: UR/0368/06/005/001/0067/0072

AUTHOR: Vlasenko, N. A.; Zyn'ko, S. A.

ORG: none

TITLE: Investigation of characteristics of low-voltage electro-luminescent ZnS-Mn films under pulsed excitation

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 1, 1966, 67-72

TOPIC TAGS: zinc sulfide optic material, electroluminescence, light excitation, optic brightness

ABSTRACT: Inasmuch as in most practical applications electro-luminescent films are used under pulsed excitation conditions, the authors determine the brightness waves, the time constant of luminescence buildup and attenuation, and the dependence of the average brightness of low-voltage ZnS-Mn films on the duration of the voltage pulse, the frequency, amplitude, and polarity in the case of rectangular pulses. The ZnS-Mn film was produced by a method described earlier (Opt. i spektr. v. 8, 81, 1960) and placed between a transparent electrode ( $\text{SnO}_2$  or  $\text{In}_2\text{O}_3$ ) and an aluminum electrode, the latter being separated from the ZnS-Mn by an insulating  $\text{SiO}$  layer. The tests were made on unit cells ranging in area from  $0.5$  to  $10^{-3} \text{ cm}^2$ . A flash of brightness was observed when a unipolar pulse was first applied to the sample, or when the polarity of

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UDC: 535.376

I. 09106-67

ACC NR: AP6027901

3

the pulses was reversed. The average brightness of the electroluminescence was found to increase appreciably on going from unipolar exciting pulses to alternating pulses. The use of alternating pulses made it possible to obtain an average brightness not lower than 15 -- 20 nit at a pulse amplitude  $\geq 30$  V, pulse duration  $\geq 20$   $\mu$ sec, and a repetition frequency  $> 200$  cps. An equivalent circuit of the electro-luminescent cell is used to explain the kinetics of the electro-luminescence and the values of the equivalent-circuit parameters are evaluated. The electro-luminescence buildup time was approximately  $4 \times 10^{-4}$  sec, and the decay time was  $1.2 \times 10^{-3}$  sec. The values were much larger than the time constant of the equivalent circuit, from which it is deduced that the growth time of the electro-luminescence in the films is connected with the duration of the excited state of the  $Mn^{2+}$  ion, and not with the capture of the carriers. It is concluded that the phosphor ZnS:Mn can be successfully used in many electro-luminescent devices which do not require very large off-duty cycles (in different character-display matrix screens etc.). The authors thank V. I. Kislyuk and I. Yu. Shablyi for help with the experiment and Doctor of Physical-Mathematical Sciences M. P. Lisitsa for interest in the work and a discussion of the results. Orig. art. has: 4 figures and 4 formulas

SUB CODE: 20/ SUM DATE: 18Feb65/ ORIG REF: 002/ OTH REF: 001

Card 2/2

CELLER, Witold; ZYCHSKI, Jozef

Semicommercial studies on the obtaining of synthetic xylenes.  
Przem chem 41 no.10:578-582 O '62.

1. Zaklad Syntezy Kontaktowej i Zaklad Technologiczny, Instytut  
Chemii Ogolnej, Warszawa.

RATYNSKI, W.; TURKIEWICZ, J.; ZYPRANSKI, P.

Potential scattering of neutrons for Fe, Co, Ni, Cu, Zn, Se. Bul Ac  
Pol mat 8 no.2:117-118 '60. (EEAI 9:12)

1. Institute of Experimental Physics, Warsaw University and  
Institute for Nuclear Research, Polish Academy of Sciences.  
Presented by A.Soltan.

(Neutrons)	(Iron)	(Cobalt)	(Selenium)
(Nickel)	(Copper)	(Zinc)	

*M*

The Annealing of Duralumin Wire. N. G. Zakharenko (*Metallog.* [TA. *Metallofizika*], 1953, 8, (6), 50-52; r. zh., 1954, 10, 1646). (In Russian.) The best results are obtained by heating to 370°-400° C. for 2-3 hrs., cooling in the furnace to 250°-70° C. and then cooling in air. This gives a tensile strength of 22-23 kg.-cm.<sup>2</sup> and an elongation of 17-18% - N. G.

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

140945 72

U.S. GOVERNMENT PRINTING OFFICE: 1964 O 506499

140945 72

U.S. GOVERNMENT PRINTING OFFICE: 1964 O 506499

**The Influence of Antimony and Bismuth on the Workability of Copper Bolts.**  
S. D. Zypurskij (*Metalurgy* (The Metallurgist), 1931, (6), 873-882; Chem.  
*Zentr.*, 1934, 106, I, 2343-2344).—[In Russian.] Copper containing less than  
0.1% antimony and 0.005% bismuth can be rolled hot to 7 mm., but with  
0.01% of each of these metals fracture occurs. For hot-rolling to 53 mm. the  
upper limits of these impurities are 0.24% antimony (with less than 0.005%  
bismuth) and 0.01% bismuth (with less than 0.01% antimony). Similar  
limits hold for cold-rolling. Normal properties of 2 mm. wire are obtained  
only when both impurities are less than 0.005%.—A. R. P.

ZYRIANOVA, T. I.

"Benzantronyl-sulphamic acid." Ioffe, I. S., Zyrianova, T. I. and Seslavin, V. R. (p. 965)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1944, Volume 14, no. 9-10.



POPOV, Aleksandr Ivanovich, prof.; ZYRIN, A.A. red.; ZHUKOVA, Ye.G.,  
tekhn.red.

[Introduction to mathematical logic] Vvedenie v matematicheskuyu  
logiku. Leningrad, Izd-vo Leningr.univ., 1959. 104 p.

(Logic, Symbolic and mathematical) (MIRA 12:9)

EVLIYA, Chelebi [Evliya, Efendi]; ZHELT'YAKOV, A.D.; TVERTINOVA, A.S. [translator]; VEKILOV, A.P. [translator]; GARBUZOVA, V.S. [translator]; GRIGOR'YEV, A.P. [translator]; ZYRIN, A.A. [translator]; IVANOVA, R.D. [translator]; IVANOV, S.N. [translator] Prinimali uchastiye: KYAMILEV, Kh. [translator]; MASHTAKOVA, Ye.I. [translator]; GRUNINA, E.A., red. izd-va; KUZ'MIN, I.F., tekhn. red.

[A travel book (excerpts from the work of a 17th century Turkish traveler); translation and commentary] Kniga puteshestviia (izvlecheniia iz sochineniia turetskogo puteshestvennika XVII veka); perevod i kommentarii. Moskva, Izd-vo vostochnoi lit-ry. (Pamiatniki literatury narodov Vostoka: Perevody, no.6) No.1. [Moldavia and the Ukraine] Zemli Moldavii i Ukrainy. 1961. 337 p. (MIRA 14:12)

1. Vostochnyy fakul'tet Leningradskogo Gosudarstvennogo universiteta (for all except Kyamilev, Mashtakova, Grunina, Kuz'min).
2. Institut narodov Azii AN SSSR (for Kyamilev, Mashtakova).  
(Elviya, Efendi, ca. 1611- ca. 1682)  
(Moldavia—Description and travel)  
(Ukraine—Description and travel)

L 18055-66 ENT(1)/ENT(m)/ETC(f)/ENG(m)/T/EMP(t)/EWA(h) IJP(e).

ACC NR: AT6006176 JD/JG/GS/AT

SOURCE CODE: UR/0000/65/000/000/0295/0300

AUTHOR: Tresvyatskiy, S. G.; Zyrin, A. V.; Maksimenko, S. A.

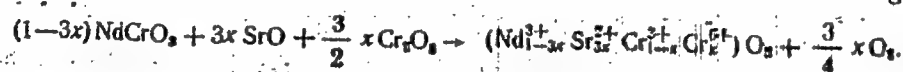
ORG: none

TITLE: Certain electrophysical properties of semiconductors based on oxides of metals with changeable valence

SOURCE: Khimicheskaya svyaz' v poluprovodnikakh i tverdykh telakh (Chemical bond in semiconductors and solids). Minsk, Nauka i tekhnika, 1965, 295-300

TOPIC TAGS: semiconductor, rare earth element, thermoelectric property, lanthanum compound, neodymium compound, chromium compound, thermal emf

ABSTRACT: The temperature dependence of the coefficient of thermoelectric force ( $\alpha$ , in microvolts/degree) was measured for a series of strontium and calcium doped lanthanum and neodymium chromites. The doping of these Perovskite-type chromites raises the valence of a portion of the chromium atoms to six according to the scheme:



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where  $x \leq 0.05$ . This is reflected in a hole-type semiconductivity in the doped chromites. The electrical conductivity of the chromite samples was measured potentiometrically by a 500 kc volt-ammeter using alternating current. For each sample, the temperature (400-1000°K) and the potential difference (which is proportional to the logarithm of sample's electrical conductivity) were recorded simultaneously. The coefficient of thermal emf ( $\alpha$ ) was calculated using the temperature difference between two ends of the sample. The temperature dependence of the thermal emf coefficient, temperature dependence of specific electric resistivity, and the dependence of  $\alpha$  on the temperature logarithm are graphed for several doped chromites. Orig. art. has: 3 figures, 3 formulas.

SUB CODE: 20

SUBM DATE: 31May65/

ORIG REF: 001/

OTH REF: 003

Card 2/2 SAV

L 21302-66 EWP(e)/ZMT(m)/EWA(d)/EWP(t) IJP(c) JD

ACC NR: AF6007292

SOURCE CODE: UR/0226/66/000/002/0092/0096

AUTHOR: Danilenko, V. A.; Zyrin, A. V.

ORG: Institute of Problems of Metal Science AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Study of the properties of sintered ferromagnetic materials by the eddy current method

SOURCE: Poroshkovaya metallurgiya, no. 2, 1966, 92-96

TOPIC TAGS: ferromagnetic material, sintering, eddy current, magnetic permeability, resonance voltage, specific conductivity, copper compound

ABSTRACT: The authors studied the possibility of applying the eddy current method to the investigation of the surface layers of conducting ferromagnetic materials. A theoretical dependence of the resonance voltage on the specific conductivity and magnetic permeability of the material is obtained. The regularity obtained was verified on sintered samples of two compositions:  $\sqrt{\text{Cu-Mo}}$  and  $\text{Fe-Cu-Mo}$ . The experimental data agree qualitatively with the theoretical calculations. Orig. art. has: 4 figures and 10 formulas. [Author's abstract.]

SUB CODE: 11/ SUBM DATE: 06Oct65/ ORIG REF: 006/

Card 1/1

ZYRIN, A.V.; TUL'CHINSKIY, L.N.

Peculiarities of the magnetic measurement of ferrite parameters  
with a rectangular hysteresis loop. Trudy inst. Kom. stand. mer i  
izm. prib no. 64:270-277 '62. (MIRA 16'5)  
(Magnetic measurements)

ZYRIN, G.

"Start Television Receiver," by G. Zyrin, Radio, No 11,  
Nov 56, pp 21-24

This article describes the construction and performance characteristics of the Start TV receiving set recently designed at one of the Moscow radio engineering plants.

This set is built with 18 miniature tubes and a rectangular 220X290-mm Type 35LK2B picture tube. It is designed for broadcast reception on 5 TV channels and 64- to 73-Mc frequency-modulation radio programs. Its sensitivity is about 200 micro-volts, and the scanning line is 450-500. The set is designed for 110-, 127-, and 220-ac power supply and consumes about 140 w. The intermediate audio frequency is 27.75 Mc and the video is 34.25 Mc. The plate potential of the frame scan generator tube is 500-600 v.

Sum 1219

ZYRIN, G., inzh.; YEFIMENKOV, R., inzh.; KHRUSTALEV, G., inzh.

"Iunost" television receiver. Radio no.1:21-25 Ja '66.  
(MIRA 19:1)



S/112/59/000/012/092/097

AO52/AOO1

Translation from: Referativnyy zhurnal, Elektrotehnika, 1959, No. 12, p. 274,  
# 25844

AUTHORS: Sevast'yanov, N.S., Zyrin, G.P.

TITLE: On Possibilities of Application of Ultrasonic Oscillations in  
Foundries

PERIODICAL: Tr. Omskogo mashinostroita, 1958, No. 2, pp. 139-145

TEXT: An ultrasonic treatment of zinc melt was carried out on a 400-kilo-  
cycle frequency. Quartz was used as an emitter. The experiments have shown that  
the hardness of irradiated samples is 1.5 times that of untreated ones. In an  
ultrasonic treated sample there are no acicular crystals. The authors maintain  
that by using magnetostrictive emitters (and, consequently, lower frequencies)  
still better results will be achieved.

M.G.S.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

ZYRIN, N.O.; ORLOV, D.S.

Methods of determining the activity of sodium ions in soils and  
soil solutions. Vest. Mosk. un. Ser. biol., pochv., geol., geog.  
13 no. 1:71-80 '58. (MIRA 11:7)

1. Moskovskiy gosudarstvennyy universitet, Kafedra pochvovedeniya.  
(Soils--Analysis)  
(Sodium)

J

COUNTRY : USSR  
 CATEGORY : Soil Science/ Soil Genesis and Geography.

ABS. JOUR. : RZhBiol., No. 5 1959, No. 20013

AUTHOR : Dobrovolskiy, G.V.; Zyrin, N.G.  
 INST. : Moscow University  
 TITLE : Geographical Features and Conditions in Bottom Land Soils.

ORIG. PUB. : Vestn. Mosk. Un-ta ser. biol., pochvoved., geol., geogr., 1957, No.3, 129-135

ABSTRACT : The zonal characteristics of river bottom soil are produced by the close genetic connection between the composition of the river's alluvium, river and ground waters edging into the valley and the features of the soil cover on the river basin. Using the Vyatka, Koma, Belaya, Oka, Moskva and Khyaz'ma River bottom lands as an example, the problem of provincial differences within the bottomland soils of a single soil-climatic zone is discussed.

CARD: 1/2

ZYRIN, N.G.

The problem of the behavior of potassium in soils. Uchenye Zapiski Moskov.  
Gosudarstven. Univ. im. M.V. Lomonosova No.105, Pt. 2, 55-78 '46.  
(CA 47 no.21:11624 '53)

ZYRIN, Nikolay Georgiyevich; ORLOV, Dmitriy Sergeyevich; VOROB'YEVA,  
Lyudmila Andreyevna; KOROBTSOVA, N.A., red.

[Reference and calculation tables for the physicochemical  
study of soils] Spravochnye i raschetnye tablitsy dlia  
fiziko-khimicheskikh metodov issledovaniia pochvy. Moskva,  
Izd-vo Mosk. univ., 1965. 131 p. (MIRA 18:8)

ZYRIN, S. — I Dr.

Metody i Organizatsiia Tekhnicheskogo Kontrolya na Predpriyatiakh Sherstianoi  
Promyshlennosti (Methods and Organization of Technical Control in the Wool  
Industry)

180 p. 1.00

SO: Four Continent Book List, April 1954

38099. ZYRIN, S. G.

Mery predotvrashcheniya loska, obrazuyushchegosya v protsesse noski  
kostyumnykh kamvol'nykh tkaney. V. Sb: Nauch.-issled. trudy (Nauch.-  
issled. in-t sherstyanoy prom-sti). M-L, 1949, s. 109-35

ZYPIN, S. G.

Zyrin, S. G. - "Preventative measures for the elimination of floss resulting from the wear of worsted cloth suits," In the symposium: Nauch.-issled. trudy (Nauch.-issled. in-t sherst. prom-sti), Moscow-Leningrad, 1949, p. 109-35

SO: U-4034, 29 Oct 53. (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).



ACC NR: AT6022255

SOURCE CODE: UR/0000/66/000/000/0048/0055

AUTHOR: Zyrin, S. S.; Karnaukh, O. I.; Petrov, D. M.

ORG: none

TITLE: Changing the frequency of a klystron oscillator with multiresonator oscillatory system

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya elektroniki. Doklady. Moscow, 1966, 48-55

TOPIC TAGS: klystron, multiresonator klystron, SHF oscillator

ABSTRACT: Two connected problems of frequency stability in a klystron oscillator are solved; on the basis of stability conditions, the oscillatory systems are analyzed, and design formulas for the multifrequency klystron oscillator are deduced. For the frequency-stability analysis, truncated equations describing a

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ACC NR: AT6022255

system with many degrees of freedom are used; supercritical couplings among  $n$  resonators ( $n$  "circuits" in an equivalent network) are assumed. The stability condition is described by:  $G_{1s} > 2G_{2w} \frac{K_s}{K_w}$ , where  $G_{1s}$ ,  $G_{2w}$ ,  $K_s$ ,  $K_w$  are the conductances and feedback factors at spurious and working frequencies, respectively. Best practical results can be obtained from 3- and 5-resonator klystrons whose central natural frequency is used as a working frequency. Engineering formulas for a 3-resonator klystron are developed (tunable band, feedback factor, stabilization coefficient, optimal stationary conditions, output power). Orig. art. has: 4 figures and 13 formulas.

SUB CODE: 09 / SUBM DATE: 09Apr66 / ORIG REF: 003

Card 2/2

22180

24,3500

S/048/61/025/004/029/048  
B117/B212

AUTHORS: Andreyev, I. S., Arzumanyan, G. B., and Zyrina, L. V.

TITLE: Various possibilities to stimulate electroluminescence properties of crystals

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 4, 1961, 520-522

TEXT: The present paper was read at the 9th Conference on Luminescence (crystal phosphors). The following test results are given: I. Investigating the effect of production conditions on the characteristic of ZnS-Cu electroluminophors resulted in: 1) The spectra of ZnS-Cu luminophors produced in media without HCl are somewhat shifted towards the short wave region compared to spectra of luminophors which have been produced in media with HCl; 2) the frequency dependence of the luminescence differs at a sinusoidal voltage for luminophors produced in different media; 3) not only the spectrum but also the frequency dependence will change if the annealing temperature is raised; 4) they will experience a similar change if the annealing time is changed. The optimum time is 2 hr;

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5) solvents will have an important but variable effect on luminosity, spectrum and frequency dependence of the luminophors. II. The investigation of the electroluminescence of single crystals has yielded the following results in the field of four electrodes which were normal to each other and at a sinusoidal voltage: 1) Absence of anisotropy of the electroluminescence properties in the crystals investigated; 2) a great influence of the electrode contact on the luminosity and its waves, especially for the case where the luminescent bands are distributed unevenly over the crystal; 3) this effect is connected with the passage of current through the crystal; 4) the form of the luminosity wave may be explained on the assumption that the illumination does not occur simultaneously at each point of the crystal. III. The investigation of luminosity maxima during a  $\square$  shaped pulsating voltage applied to a capacitor (without dielectric) showed that: 1) If the potential of the transparent electrode is constantly above the second one, then the maxima of the "swelling" and "decreasing" will develop with the same rate as the voltage changes, i.e., within  $\sim 10 \mu\text{sec}$ ; 2) the drop rate of the luminosity is by one magnitude higher than that of the increase and it is somewhat higher for the swelling maximum than for that of the decreasing maximum;

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2) if the potential of the transparent electrode is constantly below that of the 2nd electrode the maxima of the swelling and decreasing will consist of two parts: in part one, as earlier, the luminosity will increase with the rate the voltage increases or decreases; in part two, this will be  $1/2 \div 1/3$  slower. The possibility to use electrolysis for the activation of ZnS luminophors has been investigated. ZnS powder has been put into a quartz container having electrodes of a wanted material then it has been annealed in nitrogen at very high temperatures ( $700 \div 1000^{\circ}\text{C}$ ) for a certain time while a current ( $0.4 \div 15 \text{ ma}$ ) has been sent through. The relative role of the electrolysis and the diffusion during the transfer of activating substance and during the activating process has been investigated with the help of tracer atoms. The tests have shown the prevailing role of the electrolysis. Besides, they led to the assumption that the electrolysis might not only determine the acceleration of the transfer of activating elements but also the type of the swelling or it might cause other changes in the phosphorus which are favorable for the electroluminescence. In order to check this assumption tests have been made with  $\text{ZnS-AgNO}_3$  with the same silver concentration. This compound has been

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Various possibilities to...

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annealed under the same conditions as used for the production of phosphorus but without applying any current. Both luminophors showed a bright blue photoluminescence. The luminophor obtained by annealing did not show electroluminescence. The electroluminescence of the luminophors obtained by electrolysis is characterized by the following data:

Potential in volts	300	400	500	600	700	900
Luminosity in relative units	2	5.5	9.5	13	24	48

The data obtained show that it is possible to use this method for the production of electroluminophors. There are 2 Soviet-bloc references.

ASSOCIATION: Kafedra obshchey fiziki Sredneaziatskogo gos. universiteta im. V. I. Lenina (Department of General Physics of (Soviet) Central Asia State University imeni V. I. Lenin)

Card 4/4

ZYRINA, L.V.; YAGUDAYEV, M.D.

Temperature dependence of the cathodic atomization of tungsten.  
Trudy SAGU no.65:33-37 '55. (MIRA 9:5)  
(Tungsten) (Ion beams)

ALIMOV, Sh.A.; ANDREYEV, I.S.; ZIRINA, L.V.

Characteristics of the preparation of ZnS - Cu electroluminophors.  
Izv. AN Uz. SSR. Ser. fiz.-mat. nauk no.4:52-56 '61. (MIRA 14:9)

1. Tashkentskiy gosuniversitet imeni V.I.Lenina.  
(Luminescent substances) (Zinc sulfide)



ANDREYEV, I.S.; ZYPINA, L.V.; ARZUMAN'YAN, G.B.

Electrolysis as a method for the activation of electroluminophors.  
Izv. AN Uz. SSR. Ser. fiz.-mat. nauk no.4:83-87 '61. (MIRA 14:9)

1. Tashkentskiy gosuniversitet imeni V.I.Lenina.  
(Luminescent substances) (Electrolysis)

SUVOROV, A.S.; ZYRNE YON; SHIDOVICH, Ye.V.

Laboratory apparatus with a powder-catalyst fluidised bed. Neftoper.  
i neftekhim. no.6:16-17 '64. (MIRA 17:9)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimi-  
cheskoy i gazovoy promyshlennosti im. akad. Grubkina.

SOKOL, Stanislaw; ZYROMSKA, Monika; MORZYCKA, Maria.

Brain abscess in a 15-month-old child. Polski tygod.lek. 11 no.2:  
74-78 9 Jan 56.

1. Z II Kliniki Chirurgicznej: kier: prof. dr K.Debiński, z Kliniki  
Neurologicznej; kier: prof. dr E.Majewska i z Instytut Medycyny  
Morskiej i Tropikalnej A.M. w Gdańsku; kier: prof. dr J.Morzycki.  
Gdańsk-Wrzeszcz, ul. Debinki 7, II Klinika Chirurgiczna A.M.

(BRAIN, abscess  
in child)

(ABSCESS  
brain, in child)

NIELUBSZYC, Stanislaw; GYNOWSKI, Lucjan; BYROMSEA, Monika

Arteritis nodosa. Polskie arch. med. wewn. 26 no.6:949-956  
1956.

1. Z III Klin. Chorob Wewn. A.M. w Gdansk, Kier. prof. dr. med.  
J. Penson, Z Zakladu Anatomii Patolog. A.M. w Gdansk, Kier. Prof.  
dr. nauk med. W. Czarnocki, Z Kliniki Neurolog. A.M. w Gdansk,  
Kier. Prof. dr. med. Z. Majewska, Gdansk, ul. Sluz 9/10. III  
Klinika Chorob Wewn. A.M.G.

(PERIARTERITIS NODOSA, case reports,  
(Pol))

ZYROWA, E.

Work experience of the institute on principles of Marxism-Leninism  
at the medical academy in Warsaw. Zdrowie pub., Warsz. no.1:36-39  
Jan-Feb 55.

1. Kierownik Zakladu Podstaw Marksizmu-Leninizmu, A. M. w Warszawie.  
(EDUCATION, MEDICAL,  
in Poland, teaching of Marxism-Leninism)

R  
Kashurnikov, M. N., and Zyryanov, A. E. KAZAKH  
STAS ANDALUSITE. *Otkrytiye*, 10:11-12, 20 (1945).  
Of all the Soviet Union, Kazakhstan is particularly rich  
in deposits of andalusite. Many of these deposits are far  
removed from railroads, and their exploitation is not  
considered at present. Fourteen deposits, either pres-  
ently exploited or suitable for immediate exploitation,  
are described. The Semiz-Buga deposit located 140 km  
east of Karagand is estimated to contain 100,000 tons  
of ore. The andalusite content is 30 to 81%, and there is  
12 to 51% pyrophyllite. The rich ores contain 32%  
Al<sub>2</sub>O<sub>3</sub>, less than 2% Fe<sub>2</sub>O<sub>3</sub>, and less than 6% K<sub>2</sub>O + Na<sub>2</sub>O.  
The medium grade ores of this deposit contain 40%  
Al<sub>2</sub>O<sub>3</sub>; the low grade ores contain 15 to 20% andalusite.  
The Kounrad deposit is estimated at several million tons.  
The northern part of this deposit comprises an area of  
150,000 sq. m. and its southern part is approximately 200,  
000 sq. m. The ore of the northern deposit contains over  
50% andalusite. The Yuzhnye Borly deposit is located 27  
km. northwest of Kounrad. It consists of quartzites  
containing 10 to 60% andalusite and stretches over an  
area of 200,000 sq. m. In one of the better surveyed parts  
of this area the corundum content is 60 to 78%. The Bes-  
Beku deposits are located 150 km. southeast of Karkaralinsk  
and comprise 23.5 sq. km. In some of its parts were  
found pockets containing 20 to 60% andalusite. The Ak-  
Saran deposit is located 150 km. south of Karkaralinsk  
in the foothills of the Kyzyl Rai Mountains. The sec-  
ondary quartzites containing 10 to 70% andalusite stretch  
over an area of 3 sq. km. In addition, four outcrops

and numerous small veins of almost pure andalusite were  
found. The Kara-Cheku deposit, 35 km south of the  
Bes-Beku deposit, consists of loose quartzite-micaceous  
minerals containing 60 to 70% andalusite and approx-  
imately 15% kaolinite. The Kurpetal deposit, 150 km.  
southwest of Karkaralinsk, comprises 10 sq. km. of second-  
ary quartzites. Within it are three areas containing  
andalusite. The northeastern area, 250 X 400 m., contains  
30 to 80% andalusite. South of it is an area 1000 X 250 m.  
containing 30 to 60% andalusite and 10 to 30% pyrophyll-  
ite. The third area, to the northwest, contains 40 to 80%  
andalusite. Several kilometers north of Kurpetal is the  
Chok-Parta deposit, comprising 150,000 sq. m. and con-  
sisting of secondary quartzites containing 30 to 60% anda-  
lusite, with a maximum of 85%. Forty kilometers south-  
east of the Monty Karagand Railroad north of Kounrad  
is the Shesben'-Kara deposit. It consists of three areas,  
containing 15 to 30%, 40 to 60%, and 60 to 70% anda-  
lusite. This area is only partly surveyed and probably con-  
tains more than is presently estimated. The Altai deposit  
is located 17 km. from Ust'-Kamenogorsk. The minerals  
found there are quartz, diathene, andalusite, sericite, and,  
as accompanying minerals, rutile, leucosilene, pyrophyll-  
ite, and ferruginous compounds. The combined content  
of andalusite and diathene is 30 to 55%. The reserve of  
these minerals is estimated at several million tons. The

difficultly presented in concentrating this ore is the presence of Ti and Fe. A concentrate containing 36%  $Al_2O_3$  is a definite possibility. This deposit is a valuable raw-material source for the production of silumin and Al metal. The Kos-Kyzyl deposit, 97 km southeast of Kounrad, consists of two parts, one contains 10 to 40% and the other over 50% andalusite. The deposit "Mawiy Ulp" is located 23 km. southeast of Bektau-Ata. Over a secondary quartzite area of 210,000 sq. m., 40 to 80% andalusite was found. In the deposit of Kazy-Tas 23 km. south of Ak-Togai, were found four areas of secondary quartzites containing 10 to 35% andalusite enriched by 5 to 15% corundum and diaspore. In addition 30 to 40% alunite was also found. In the northern branches of the Bektau-Ata Mountains is the Telmes deposit covering an area of 270,000 sq. m. and containing 30 to 50% andalusite. The value of andalusite in the production of refractories is proved. It is used in the production of spark plugs, protective coatings in glassmelting pots, stoppers and linings for steel pouring ladles, refractories for cupolas, etc.

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSED AND DOCUMENTED INDEX																			
<p>CA</p> <p>Andalusites of Kazakhstan. M. N. Koshurnikov and  A. R. Zvyagintsev. <i>Ogneupory</i> 10, No. 4-6, 23-61 (1951).  A short description of very rich andalusite deposits of  Kazakhstan is given. M. V. Condonie.</p>										<p>8</p>									
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>1ST AND 2ND ORDERS</p>									
<p>3RD AND 4TH ORDERS</p>										<p>1ST AND 2ND ORDERS</p>									



A.E.S.

Geology

Kazakhstan andalusite. M. N. KOSYUNINOV AND A. E. ZYVANSKIY. *Ogneberg*, 1945, No. 4/5, pp. 23-26. — On all the Soviet Union, Kazakhstan is particularly rich in deposits of andalusite. Many of these deposits are far removed from railroads, and their exploitation is not considered at present. Fourteen deposits, either presently exploited or suitable for immediate exploitation, are described. The Semiz-Baga deposit located 140 km. east of Karagay is estimated to contain 100,000 tons of ore. The andalusite content is 30 to 81%, and there is 12 to 51% pyrophyllite. The rich ores contain 32%  $Al_2O_3$ , less than 2%  $Fe_2O_3$ , and less than 6%  $K_2O + Na_2O$ . The medium-grade ores of this deposit contain 49%  $Al_2O_3$ ; the low-grade ores contain 15 to 25% andalusite. The Kounrad deposit is estimated at several million tons. The northern part of this deposit comprises an area of 150,000 sq. m. and its southern part is approximately 200,000 sq. m. The ore of the northern deposit contains over 39% andalusite. The Yuzhnye Borly deposit is located 27 km. northwest of Kounrad. It consists of quartzites containing 10 to 60% andalusite and stretches over an area of 265,000 sq. m. In one of the better surveyed parts of this area the andalusite content is 60 to 78%. The Bes-Bek deposit is located 150 km. southeast of Karakalinsk and comprises 23.5 sq. km. In some of its parts were found pockets containing 29 to 60% andalusite. The Ak-Saran deposit is located 150 km. south of Karakalinsk in the foothills of the Kyzyl-Kai Mountains. The secondary quartzites containing 10 to 70% andalusite stretch over an area of 2 sq. km. In addition, four outcrops and numerous small veins of almost pure andalusite were found. The Kara-Chok deposit, 25 km. south of the Bes-Bek deposit, consists of some quartz-micaeous minerals containing 60 to 70% andalusite and approximately 15% kaolinite. The Karptal deposit, 150 km. southeast of Karakalinsk, comprises 10 sq. km. of secondary quartzites. Within it are three areas containing andalusite. The northeastern area, 250 x 400 m. contains 30 to 37% andalusite. South of it is an area 1000 x 250 m. containing 20 to 37% andalusite and 10 to 30% pyrophyllite. The third area, to the northwest, contains 40 to 60% andalusite. Several kilometers north of Karptal is the Chok-Parta deposit, comprising 180,000 sq. m. and consisting of secondary quartzites containing 30 to 61% andalusite, with a maximum of 85%. Forty kilometers southeast of the Mount Karagand Railroad, north of Kounrad, is the Shaban-Kara deposit. It consists of three areas containing 15 to 23%, 40 to 60%, and 60 to 70% andalusite. This area is only partly surveyed and probably contains more than is presently estimated. The Altai deposit is located 17 km. from Ust'-Kamenogorsk. The minerals found there are quartz, datolite, andalusite, vesicite, and, as accompanying minerals, rutile, leucosphen, pyrophyllite, and ferruginous compounds. The combined

(over)

content of andalusite and diaspore is 20 to 55%. The reserve of these minerals is estimated at several million tons. The difficulty presented in concentrating this ore is the presence of Ti and Fe. A concentrate containing 55%  $Al_2O_3$  is a definite possibility. This deposit is a valuable raw-material source for the production of alumina and Al metal. The Koa-Kysyl deposit, 97 km. southeast of Kounrad, consists of two parts; one contains 10 to 40% and the other over 50% andalusite. The deposit "Masse UP" is located 22 km. southeast of Bektau-Ata. Over a secondary quartzite area of 234,000 sq. m., 40 to 80% andalusite was found. In the deposit of Kazy Tas, 25 km. south of Ak-Togai, were found four areas of siliceous quartzites containing 10 to 85% andalusite enriched by 5 to 15% corundum and diaspore. In addition 30 to 50% alundite was also found. In the northern branches of the Bektau-Ata Mountains is the Teles deposit covering an area of 270,000 sq. m. and containing 30 to 80% andalusite. The value of andalusite in the production of refractories is proved. It is used in the production of spark plugs, protective casings in glassmelting pots, stoppers and linings for steel-pouring ladles, refractories for cupolas, etc.

M.Ho.

GRINDEL', N.M.; ZYRIN, N.G.

Method for determining the organophosphorus compounds and their dynamics in the plowing horizon of slightly cultivated turf-Podzolic soils. Pochvovedenie no. 12:17-27 D '65.

MIRA 19:1)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.  
Submitted July 31, 1964.

ZYRIN, N.G.; GRINDEL', N.M.

Seasonal dynamics of the oxidation-reduction potential and iron soluble in acids ( $\text{Fe}^{2+}$  and  $\text{Fe}^{3+}$ ) in turf-Podzolic soils. Nauch. dokl.vys.shkoly; biol.nauki no.2:175-181 '63. (MIRA 16:4)

1. Rekomendovana kafedroy pochvovedeniya Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.  
(OXIDATION-REDUCTION REACTION) (SOILS---IRON CONTENT) (PODZOL)